

at all times on an unlimited basis.³⁸ The view overlooks as well that the consumption of network access and network usage, like the consumption of any normal good, will rise as price falls.³⁹ The network outage experienced in August 1996 by the Internet access provider America Online⁴⁰ may be an imperfect analogy to the congestion externality that may beset the local exchange network in the new era of unbundled access, but it nonetheless provides vivid evidence that congestion externalities can and do occur—even without regulatory intervention that stimulates demand for network access by virtue of having set access prices below the full economic cost to the incumbent network operator of providing unbundled functions to its competitors. By October 1996, Pacific Bell reported that roughly 15 percent of local calls were not being successfully completed in the Silicon Valley area of California because Internet usage there, while still a small fraction of total telephone subscribers, had risen to a level that it was seriously congesting the capacity of the local exchange.⁴¹

67. The tragedy of the telecommons also implies underinvestment in the maintenance, replacement, and enhancement of the local telecommunications network. If the incumbent LEC, the putative owner of the local network, no longer can recover the costs of investments that it would make on a forward-looking basis—let alone keep any economic rents accruing to such investments—then ALECs become free riders and the incumbent LEC's incentive to make further investment in the local exchange network evaporates.

68. Carried to its logical conclusion, the tragedy of the telecommons implies that the owner of the local network will go broke and the quality of the network will deteriorate. Given the preference

38. BELL COMMUNICATIONS RESEARCH, BOC NOTES ON THE LEC NETWORK at 4-24 (Bellcore 1994) (describing blocking probabilities for trunking); 1 BELL COMMUNICATIONS RESEARCH, TELECOMMUNICATIONS TRANSMISSION ENGINEERING: PRINCIPLES 604 (Bellcore 1990) ("[E]xcessively high traffic . . . has its greatest impact on switching system operation. This form of overload causes blocking of calls and a breakdown of service.").

39. Robert Crandall is one of the few economists to recognize the potential for inadequately low prices for network access to stimulate inefficiently high levels of use of the incumbent LEC's network by competitors. See Statement of Robert W. Crandall on Interconnection Policies for CMRS (Mar. 4, 1996), submitted in Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers: Equal Access and Interconnection Obligations Pertaining to Commercial Mobile Radio Service Providers, CC Dkt. No 95-185.

40. *Big On-Line Crash Frustrates Businesses*, N.Y. TIMES, Aug. 8, 1996, at A1.

41. James Kim, *Net Use Strains Phone Lines*, USA TODAY, Oct. 30, 1996, at 1A.

of regulators to combine TSLRIC pricing for access and UNEs with a reluctance to impose a new competitively neutral, nonbypassable charge (or the increase in an existing charge of that sort), the incumbent LEC will consistently fail to earn revenues from its local exchange operations that will cover their total forward-looking costs. Having imposed such regulatory policies concerning unbundling, the Commission and the state public utilities commission will not be able to expect *any* private investor to take over operation of the local network in the absence of the payment of an explicit subsidy to cover operating losses. The alternative thus becomes public ownership of the network: The logical culmination of unbundling accompanied by TELRIC pricing and continuing asymmetric regulation of the incumbent LEC is the need for some public entity to buy the network and assume financial responsibility for its operating deficits. Paradoxically, the great experiment with network unbundling and access “reform” following enactment of the Telecommunications Act of 1996 shows indications of producing not deregulation, but subsidized competition and public ownership of private enterprise.

F. TSLRIC Pricing Plus Arbitrary Shares of Common Costs Lacks Dynamic Pricing Flexibility and Creates Incumbent Burdens

69. TSLRIC pricing plus arbitrary shares of common costs lacks dynamic flexibility, for there is no room for price adjustment. Pricing at the lowest possible level is not sustainable in the long run because no company can continue to operate indefinitely without covering its shared costs and common costs.

70. Proponents of TSLRIC pricing argue that because prices in competitive markets tend toward incremental costs, regulators should immediately reduce price to its lowest level. That argument is flawed because it presupposes that a competitive market eliminates all margins over marginal cost. To the contrary, competitive markets determine the size of relative margins on products depending on many factors, including the extent of shared costs and common costs, demand elasticities, product differentiation, transactions costs, and marketing and sales efforts. Moreover, the argument presupposes that regulators can discern competitive price levels more accurately than the market can—a proposition

forcefully rebutted by Hayek and many after him.⁴²

71. A system of price caps protects consumers from price increases while allowing competitive price decreases. TSLRIC, however, is inconsistent with price caps. It does not allow prices to be adjusted in response to competition. Regulators should not adopt TSLRIC pricing to pursue a mistaken representation of how markets operate. Instead, regulators should let competition determine the margins on unbundled services. TSLRIC pricing, by automatically eliminating *all* margins, leaves the incumbent LEC no room for competitive price adjustment and thus creates a competitive disadvantage relative to new entrants.

72. The Telecommunications Act of 1996 offers a unprecedented opportunity for further growth of competition in local exchange telecommunications. As a precondition, however, the Act requires additional regulation of prices for resale and UNEs. To achieve the intended benefits of competition, it is essential that regulatory commissions grant incumbent LECs sufficient flexibility to adjust their prices for resale and UNEs to reflect customer demand and market conditions. Regulatory rules for pricing of resale and UNEs should allow the incumbent LECs to recover their economic costs, including the additional costs of following unbundling rules. If prices for resale and UNEs are to be regulated, then price controls should not discriminate against the incumbent LECs by placing them at a competitive disadvantage in the marketplace.

73. Regulatory commissions should allow the incumbent LECs the same flexibility in pricing and defining unbundled services that is available to the competitive local exchange carriers. Regulators should not mandate excessive unbundling of the "components" of demonstrably competitive services, for competitive markets suffice to determine the efficient extent of unbundling.

74. Whether the incumbent LEC is providing services to retail customers or to other

42. Friedrich A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945). For a summation of Hayek's theories on the superiority of markets over state control of production, see FRIEDRICH A. HAYEK, *THE FATAL CONCEIT: THE ERRORS OF SOCIALISM* (W.W. Bartley, III, ed., Routledge 1988).

telecommunications companies, negotiation and competition should be relied upon as much as possible to price services and to resolve whether particular services should be offered in combination with others or *à la carte*. TSLRIC pricing is an extreme negotiating position taken by competitive local exchange carriers seeking access to network services and elements at prices below economic costs.

75. A regulatory commission should not establish pricing and unbundling restrictions that bias decisions about the type of technology that a carrier may employ to offer local telephony service. The absence of such restrictions should apply equally to the incumbent LEC and alternative local exchange carriers. The pricing of UNEs should be determined by customer choice and competitive interaction between the incumbent LEC, the alternative local exchange carriers, and the many other providers of transmission capacity. TSLRIC pricing can bias technology choice by eliminating the rewards from economies of scope, thereby encouraging separation of network services into components associated with incremental costs.

G. TSLRIC Pricing Is Discriminatory

76. TSLRIC pricing is discriminatory because it creates subsidies for entering competitive local exchange carriers at the expense of the incumbent LECs. As we have demonstrated, TSLRIC pricing does not cover the incumbent LEC's direct economic costs, because it ignores shared costs and common costs. Moreover, TSLRIC pricing creates cross-subsidies because it yields revenues that fail to cover the incremental costs of any *combination* of two or more services that have shared costs. TSLRIC pricing further fails to cover the incumbent LEC's economic costs because it ignores the LEC's opportunity costs when it is compelled to sell inputs to competitors.

77. No competitive firm would agree to pricing below costs. No competitive firm could offer services that subsidize one another, or that contain subsidies for competitors and thus encourage free riding on the firm's facilities. By forcing the incumbent LEC to accept prices to which a competitive firm would never agree, TSLRIC pricing places the LEC at a competitive disadvantage relative to its competi-

tors. Facilities-based competitors certainly will not be subject to such pricing regulations. The discriminatory impact on the incumbent LEC of TSLRIC pricing is undeniable.

H. Summary

78. The supposed efficiency of TSLRIC pricing and TELRIC pricing with administratively determined shares of common costs is a mirage. Such pricing would not in its application cover the firm's total direct costs, nor would it compensate the firm for its economic costs inclusive of opportunity costs. Competitive pricing does not emulate TSLRIC or TELRIC pricing or fully distributed cost pricing approaches. To the contrary, such pricing would invite free riding and would subsidize entrants, both conditions that competitive markets do not willingly tolerate. The imposition of TSLRIC or TELRIC pricing would create the perverse incentive for the incumbent LEC to reduce its common costs and shared costs. That action would be the direct response to the tendency of such pricing to shift attributable costs to shared costs and common costs, and to increase the incumbent LEC's shared costs and common costs as a result of unbundling. In addition to those failings, TSLRIC or TELRIC pricing does not permit the incumbent LEC to have dynamic pricing flexibility. Such pricing discriminates in favor of entrants and against the incumbent LEC. In short, the call to apply TSLRIC or TELRIC pricing to interstate access (as well as to resale and unbundled network elements) is a mantra that misapprehends the most basic principles of price theory.

IV. THE REGULATORY CONTRACT AND THE ECONOMIC AND LEGAL CASE FOR FULL COST RECOVERY

79. In this section we show that the regulatory contract is an enforceable legal relationship, not a mere metaphor. Substantial historical evidence substantiates the existence of a regulatory contract, and compelling economic arguments confirm the need for such a contract between the local exchange carrier and the state. Next we examine the key elements of the regulatory contract. Given the existence of the contract, the state cannot credibly assert that it owes no remedy to an local exchange carrier when

the state breaches the regulatory contract while adopting policies that promote competitive entry. We then examine the local exchange carrier's remedy for the regulator's breach of the regulatory contract, which we show to be the standard remedy for breach of any contract: damages for lost expectations. If a regulator permits entry into the market served by a regulated local exchange carrier while leaving the utility's incumbent burdens in place, the regulator will have confiscated the wealth of the utility's shareholders. The regulator will have denied those shareholders the benefit of their bargain with the regulator—that is, their expectation under the regulatory contract. If the regulator fails to introduce a mechanism by which the utility can recover its stranded costs, the regulator will have denied the utility the ability to maintain financial solvency. Finally, even if one rejects (wrongly) the notion that a legally enforceable contract exists between the incumbent utility and the state, related remedies under the common law doctrines of mistake, impossibility, and promissory estoppel would nonetheless entitle the utility to damages sufficient to recover its stranded costs, if not more.

A. Historical Origins of the Regulatory Contract

80. As a historical matter, the regulation of public utilities such as telecommunications and electric utilities is built on contract law. Municipalities and public utilities routinely entered into explicit contracts in the nineteenth century and early twentieth century, long before the advent of the state public utilities commissions. During the first half of the nineteenth century, city governments lacked the necessary financial resources and expertise to provide their citizens all the benefits that might flow from the momentous scientific and industrial developments of that era. So the cities solicited the help of private entrepreneurs.⁴³

43. See WILLIAM M. IVINS & HERBERT DELAVAN MASON, *THE CONTROL OF PUBLIC UTILITIES* 4–15 (Baker, Voorhis & Co. 1908); I DELOS F. WILCOX, *MUNICIPAL FRANCHISES* 1–3 (Gervaise Press 1910); JOSEPH A. JOYCE, *A TREATISE ON FRANCHISES* 542–54 (Banks Law Publishing Co. 1914); HERBERT B. DORAU, *MATERIALS FOR THE STUDY OF PUBLIC UTILITY ECONOMICS* 2–9, 12–22, 33–61 (MacMillan Co. 1930); ELI WINSTON CLEMENS, *ECONOMICS AND PUBLIC UTILITIES* 72–73 (Appleton-Century-Crofts, Inc. 1950).

1. The Original Understanding of the Regulatory Contract

81. State legislatures or local municipalities offered charters or franchises to railroads and utilities. Those contracts gave the private firm critical access to public rights-of-way and often delegated to them the power of eminent domain. In return, the firm committed to building the costly infrastructures and accepted the obligation to serve the public on a nondiscriminatory basis at reasonable rates sufficient to recover the firm's investment. Each franchise was the product of a bargained-for exchange that allowed private enterprises the opportunity to earn a competitive return.

82. Professor George Priest of Yale Law School argues that "[p]ublic utility companies voluntarily entered contracts subjecting themselves to regulation in order to gain authority to use public rights-of-way" and that "[r]egulation of the utility's activities and terms of business resulted from a negotiation between the municipal government and the utility in a context that both parties recognized saved the utility the costs of negotiating with and securing rights from the individual property owners they intended to serve."⁴⁴ Utility franchises evolved over time, ultimately creating administrative boards.⁴⁵ From those administrative boards grew the state regulatory commissions, most of which came into existence between 1907 and 1922.⁴⁶

83. Numerous Supreme Court decisions confirm the understanding that the public utility entered into a contract with the state or municipal government. For example, in *The Binghamton Bridge*, the Supreme Court stated:

The legislature . . . says to public-spirited citizens: "If you will embark, with your time, money, and skill, in an enterprise which will accommodate the public necessities, we will grant to you, for a limited period, or in perpetuity, privileges that will justify the expenditure of your money, and the employment of your time and skill." Such a grant is a contract, with mutual considerations, and justice and good policy alike require that the protection of the law should be assured to it.⁴⁷

⁴⁴ George L. Priest, *The Origins of Utility Regulation and the "Theories of Regulation" Debate*, 36 J.L. & ECON. 289, 303 (1992).

⁴⁵ *Id.* at 321.

⁴⁶ *Id.* at 296.

⁴⁷ 70 U.S. (3 Wall.) 51, 73 (1865).

Similarly, in *New Orleans Water-Works Co. v. Rivers* the Court in 1885 said a utility's franchise to operate a waterworks

was a contract, the obligation of which cannot be impaired by subsequent legislation, or by a change in her organic law. It is as much a contract, within the meaning of the Constitution of the United States, as a grant to a private corporation for a valuable consideration, or in consideration of public services to be rendered by it, of the exclusive right to construct and maintain a railroad within certain lines and between given points, or a bridge over a navigable stream within a prescribed distance above and below a designated point.⁴⁸

In *Walla Walla City v. Walla Walla Water Co.*, the Court in 1898 stated:

[T]his court has too often decided for the rule to be now questioned, that the grant of a right to supply gas or water to a municipality and its inhabitants through pipes and mains laid in the streets, upon condition of the performance of its service by the grantee, is the grant of a franchise vested in the State, in consideration of the performance of a public service, and after performance by the grantee, is a contract protected by the Constitution of the United States against state legislation to impair it.⁴⁹

84. Early legal scholarship confirms this original understanding of the contractual nature of the franchise relationship. A treatise from the early twentieth century concluded:

[F]ranchises are based in this country upon contracts between the sovereign power and a private citizen, made upon a valuable consideration for purposes of public benefit as well as for individual advantage; and it is said by Chancellor Kent that franchises 'contain an implied covenant on the part of the government not to invade the right vested, and on the part of the grantees to execute the conditions and duties prescribed in the grant. Some of these franchises are presumed to be founded on a valuable consideration, and to involve public duties, and to be made for public accommodation, and to be affected with *jus publicum*, and they are necessarily exclusive in their nature. The government cannot resume them at pleasure, or do any act to impair the grant, without a breach of contract.'⁵⁰

85. The Supreme Court well recognized by the turn of the century that key provisions in the regulatory contract existed to ensure cost recovery for specialized investments and to deter opportunism. In 1898 it observed: "It is not to be supposed that the company would have entered upon this large undertaking in view of the possibility that, in one of the sudden changes of public opinion to which all

48. 115 U.S. 674, 681 (1885); accord, *New Orleans Gas Co. v. Louisiana Light Co.*, 115 U.S. 650, 661 (1885).

49. 172 U.S. 1, 8-9 (1898).

50. JOYCE, *supra* note 43, at 12 (citing KENT'S COMM. (14th ed.))

municipalities are more or less subject, the city might . . . practically extinguish the rights it had already granted to the company.”⁵¹ In 1902, the Court similarly observed: “It would hardly be credible that capitalists about to invest money in what was then a somewhat uncertain venture, . . . would at the same time . . . give the right to the [municipality] to change at its pleasure from time to time those important and fundamental rights affecting the very existence and financial success of the company”⁵²

2. The Vitality of the Notion that Regulators Are Bound by Contract

86. A recent decision by the Supreme Court of the United States implies the continued viability of the regulatory contract. The Supreme Court’s decision in *United States v. Winstar Corporation*,⁵³ while it does not address the telecommunications industry, indicates how the Court would likely view a case involving recovery of stranded costs arising from breach of the regulatory contract in a regulated network industry such as telecommunications. To understand that relevance, it is necessary first to review the essential facts of the case.

87. Three thrifts sued the United States for breach of contract after they had been declared in violation of capital requirements of the new Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA). The thrifts argued that savings and loan regulators had promised to indemnify them from the type of regulatory change that FIRREA produced. During the savings and loan crisis of the 1980s, the Federal Home Loan Bank Board sought to induce healthy thrifts to merge with failing ones. The Board signed agreements with the healthy thrifts allowing them to count the excess of the purchase price over the fair market value of the acquired assets as an intangible asset—“supervisory goodwill”—that counted towards fulfilling capital reserve requirements. Without those agreements, the thrifts created by the mergers would have violated capital reserve requirements. Overall, the Board’s practice of encouraging such merged thrifts was a failure and promised to lead to the insolvency of federal deposit

51. *Walla Walla*, 172 U.S. at 17-18.

52. *Detroit v. Detroit Citizens’ Street Railway Co.*, 184 U.S. 368, 385 (1902).

53. 1996 U.S. LEXIS 4266 (July 1, 1996).

insurance funds for the thrifts. Eventually, Congress enacted FIRREA, which forbade thrifts from counting supervisory goodwill toward capital requirements. Two of the three plaintiff thrifts in *Winstar* were promptly seized and liquidated by regulators for failing to comply with the new capital requirements; the third avoided seizure only by aggressively recapitalizing.

88. A plurality of the Supreme Court upheld the Federal Circuit's determination that the government had breached contractual obligations to the thrifts and was liable for breach of contract. The government raised two defenses. The first was the "unmistakability" defense, under which surrenders of sovereign authority, to be enforceable, must appear in unmistakable terms in a contract. Justices Souter, Stevens, O'Connor, and Breyer found that the defense did not apply to the contracts at issue, because the plaintiffs were suing not to stop the government from changing capital requirements applicable to thrifts, but to compel the government to indemnify them. Justices Scalia, Kennedy, and Thomas found that the government had unmistakably agreed to indemnify the thrifts in this particular case.

89. Justice Souter reasoned that application of the "unmistakability" defense "would place the doctrine at odds with the Government's own long-run interest as a reliable contracting partner in the myriad workaday transaction of its agencies."⁵⁴ The government would lose its ability to make credible commitments. "Injecting the opportunity for unmistakability litigation into every common contract action," Justice Souter wrote, "would . . . produce the untoward result of compromising the Government's practical ability to make contracts, which we have held to be 'the essence of sovereignty itself.'"⁵⁵ He further explained:

The Court has often said, as a general matter, that the "rights and duties" contained in a government contract "are governed generally by the law applicable to contracts for private individuals." . . . This approach is unsurprising, for in practical terms it ensures that the government is able to obtain needed goods and services from parties who might otherwise, quite rightly, be unwilling to undertake the risk of government contracting.⁵⁶

54. *Id.* at *77

55. *Id.* at *78 (quoting *United States v. Bekins*, 304 U.S. 27, 51-52 (1938)).

56. *Id.* at *126 (quoting *Lynch v. United States*, 292 U.S. 571, 579 (1934)).

90. The government's second defense was the "sovereign act" defense, under which a "public and general" sovereign act could not trigger contractual liability. Justices Souter, Stevens, and Breyer agreed that FIRREA was not public and general, for the legislative history clearly showed that the act's purpose was to relieve the government of certain particular obligations. Justices Scalia, Kennedy, and Thomas found that the "sovereign acts" defense could not be used when the government tries to abrogate the essential bargain of the contract.

91. The reasoning in *Winstar* is directly analogous to the contractual issues implicated by the mandatory unbundling of regulated network industries. Justice Souter emphasized that the government is required to fulfill contractual obligations even when the cost of doing so might deter regulation by raising its costs:

We recognize, of course, that while agreements to insure private parties against the costs of subsequent regulatory change do not directly impede the exercise of sovereign power, they may indirectly deter needed governmental regulation by raising its costs. But all regulations have their costs, and Congress itself expressed a willingness to bear the costs at issue here⁵⁷

Elsewhere, Justice Souter noted that it is particularly important to treat government contracts with regulated firms as binding:

It is important to be clear about what these contracts did and did not require of the Government. Nothing in the documentation or the circumstances of these transactions purported to bar the Government from changing the way in which it regulated the thrift industry. Rather . . . "the Bank Board and the FSLIC [the federal savings and loan insurance fund] were contractually bound to recognize the supervisory goodwill and the amortization periods reflected" in the agreements between the parties. We read this promise as the law of contracts has always treated promises to provide something beyond the promisor's absolute control, that is, as a promise to insure the promisee against loss arising from the promised condition's nonoccurrence *Contracts like this are especially appropriate in the world of regulated industries, where the risk that legal change will prevent the bargained-for performance is always lurking in the shadows.*⁵⁸

That admonition is compelling where the government wishes to use contract as an instrument of regulation: "Since the facts of the present case demonstrate that the Government may wish to further its

57. *Id.* at *76.

58. *Id.* at *52 (quoting *Winstar Corp. v. United States*, 64 F.3d 1531, 1541-42 (Fed. Cir. 1995) (en banc) (emphasis added)).

regulatory goals through contract, we are unwilling to adopt any rule of construction that would weaken the Government's capacity to do business by converting every contract it makes into an arena for unmistakability."⁵⁹ Thus, the reasoning in *Winstar* would apply even more forcefully to a regulated local exchange carrier, which has made significant nonsalvageable investments in its transmission network.

B. Economic Rationales for the Regulatory Contract

92. Economic analysis of regulation and long-term contracting reinforce the conclusion drawn from historical analysis that the regulatory contract was necessary to address cost recovery, asset specificity, opportunism, and credible commitments.

93. Consumers and businesses voluntarily participate in a market transaction only if they receive *gains from trade*—that is, only if the transaction yields positive net benefits for them. A supplier will not invest in a transaction unless the supplier expects the returns from the transaction to cover all economic costs, including a competitive return to invested capital. That principle is summarized in Armen Alchian's classic definition of cost: "In economics, the cost of an event is the highest-valued opportunity necessarily forsaken."⁶⁰ The supplier's costs of investing in the transaction include the highest net benefit of all opportunities forgone, known as *opportunity cost*.

1. Cost Recovery for Transaction-Specific Investment

94. Cost recovery is an essential element of contract law. A contract must provide *consideration* to each of the parties, which implies that those incurring costs must expect to recover those costs including a return to invested capital.⁶¹ Cost recovery is an essential aspect of utility regulation as well.⁶² Utilities would not have undertaken the extensive investments required to provide regulated service within their franchise region without the opportunity to recover their costs. The President's

59. *Id.* at *82.

60. Armen A. Alchian, *Cost*, in 3 INTERNATIONAL ENCYCLOPEDIA OF THE SOCIAL SCIENCES 404, 404 (David L. Sills ed., MacMillan Co. & Free Press 1968).

61. See Victor P. Goldberg, *Relational Exchange: Economics and Complex Contracts*, 23 AM. BEHAVIORAL SCIENTIST 337 (1980), reprinted in READINGS IN CONTRACT LAW 16, 18 (Victor P. Goldberg ed., Cambridge University Press 1989).

62. See JEAN-JACQUES LAFFONT & JEAN TIROLE, A THEORY OF INCENTIVES IN PROCUREMENT AND REGULATION 53-127 (MIT Press 1993).

Council of Economic Advisers endorsed this economic reasoning in its 1996 report:

[T]here is an important difference between regulated and unregulated markets. Unregulated firms bear the risk of stranded costs but are entitled to high profits if things go unexpectedly well. In contrast, utilities have been limited to regulated rates, intended to yield no more than a fair return on their investments. If competition were unexpectedly allowed, utilities would be exposed to low returns without having had the chance to reap the full expected returns in good times, *thus denying them the return promised to induce the initial investment*. A strong case therefore can be made for allowing utilities to recover stranded costs where those costs arise from after-the-fact mistakes or changes in regulatory philosophy toward competition, as long as the investments were initially authorized by regulators.⁶³

"The regulatory contract," one of us has noted in prior writings, "is often justified as a means of mitigating the risks of making large irreversible investments that are faced by regulated utilities."⁶⁴ He reasons: "Customers of utilities gain from such commitments, since efficient levels of investment yield lower costs of service. There is an incentive to honor commitments regarding compensatory rates of return to assure that regulated firms will undertake future investment and that they will maintain their existing capital equipment."⁶⁵ The Supreme Court of Texas, for example, has observed that the state's public utility act

balances the important objective of protecting consumers from monopoly power with the need for financial stability which is required to attract the large amounts of investment capital essential to dependable utility service. *When balancing the interests of consumers and utilities, the financial integrity of the utility weighs in favor of both sides*. If the utility is forced to pay higher costs of capitalization, the increased costs will eventually be borne by the consumer.⁶⁶

As one of us has concluded in an earlier book, "honoring commitments to investors in regulated utilities keeps down future borrowing costs by reducing investor risk."⁶⁷

95. Cost-of-service regulation of public utilities is based on allowing a utility the opportunity to recover its investment, including a competitive rate of return. "In the absence of a detailed long-term

63. 1996 ECONOMIC REPORT OF THE PRESIDENT 817 (emphasis added).

64. DANIEL F. SPULBER, REGULATION AND MARKETS 610 (MIT Press 1989).

65. *Id*

66. State v. Public Utility Comm'n, 883 S.W.2d 190, 202 (1994) (emphasis added; citations omitted).

67. SPULBER, *supra* note 64, at 610.

contract,” note Professors Laffont and Tirole, “the regulated firm may refrain from investing in the fear that once the investment is in place, the regulator would pay only for variable cost and would not allow the firm to recoup its sunk cost.”⁶⁸ Utilities have had to undertake substantial investments to discharge their obligation to serve. The purpose of a regulatory contract is to provide for recovery of “economic costs,” by which we mean the full cost of an activity, including direct expenditures, the time cost of money expended for capital investment, and any other opportunity costs. As mentioned earlier, an opportunity cost of an activity is the net benefit forgone from the next best alternative activity. The time cost of money is an opportunity cost of an investment because it represents the highest return that the investor could have earned by investing the money elsewhere.

96. The expectation that a utility will be able to recover its costs applies as well to new expenditures that the utility makes to satisfy regulatory obligations even if the industry is partially or fully deregulated. The utility cannot be asked to provide services in the competitive market at regulated prices that are noncompensatory—that is, at prices that do not allow for full cost recovery, particularly when the firm is mandated to offer unbundled services. Moreover, the introduction of resale and network unbundling does not eliminate the responsibilities of regulatory authorities to allow the incumbent utility the opportunity to recover costs *already incurred* to satisfy the utility’s obligation to serve. Regulators have a continuing responsibility to allow the utility the opportunity to recover those costs.

2. Regulatory Opportunism and Asset Specificity

97. The noted economist Oliver Williamson defines *opportunism* as “self-interest seeking with guile.”⁶⁹ He describes utility regulation as a “highly incomplete form of long-term contracting” in which the terms are adapted to “changing circumstances” to assure the supplier of a fair rate of return.⁷⁰ The

68. LAFFONT & TIROLE, *supra* note 62, at 54.

69. OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING* 47 (Free Press 1985).

70. Oliver E. Williamson, *Franchise Bidding for Natural Monopolies—in General and with Respect to CATV*, 7 BELL J. ECON. 73, 91 (1976).

problem of regulatory opportunism stems from the fact that regulatory assets, including expenditures for plant and equipment and capitalized expenditures to perform duties mandated by regulators, are likely to be transaction-specific. That is, the assets have little value outside the regulatory transaction.⁷¹

98. The transition from regulation to competition being observed in markets traditionally served by public utilities is facilitated by technological changes that affect the degree of asset specificity. The regulatory contract that was suited for an industry with significant asset specificity is not suited for an industry in which asset specificity has declined considerably. This problem of incompatibility between the degree of asset specificity and the regulatory regime arises in the transition to competition: Incumbent utilities have not yet recovered the costs of their assets that are specific to a regulated market, and entrants meanwhile can invest in facilities that have considerably less asset specificity or can provide service with minimal investment. It would breach the regulatory contract for the regulator to make unilateral changes in regulation that might prevent a utility from recovering the economic costs of investments that it made to discharge its regulatory obligations to serve. Contractual protections of the interests of the utility and its investors exist so that the state and private companies can continue to make agreements requiring investments in highly specialized capital. The regulatory contract depends on protections to reduce and allocate the risk of cost recovery for specialized assets that cannot be salvaged if the contract is not performed.

99. As with private contracts, the regulatory contract is designed to address "hold-up" problems. By incurring substantial capital expenditures to perform its obligation to serve, the utility is vulnerable to confiscation. In the absence of contract enforcement, the utility is at the mercy of the regulatory authority: By lowering rates to levels that do not allow a full recovery of costs, after the facilities have been created, a regulator could take advantage of the utility and its investors. The prices posted by a utility can be raised or lowered without incurring more than the costs of communicating the

71. An asset's degree of specificity is "the fraction of [the asset's] value that would be lost if it were excluded from its major use." PAUL MILGROM & JOHN ROBERTS, *ECONOMICS, ORGANIZATION AND MANAGEMENT* 307 (Prentice Hall 1992).

new tariffs to customers. The regulated rates are thus much more flexible than are the utility's capital facilities because the latter are irreversible, market-specific investments. To the extent that they were tailored to meet regulatory obligations to serve, the utility's investments need not be fully recovered in a competitive market setting. That means that the regulatory contract is necessary as a means of protecting the regulated utility from regulatory "hold-up."

100. The opportunity to permit retail wheeling tempts regulators to behave in an opportunistic manner. The utilities have already constructed their network facilities. They will keep those facilities in operation as long as revenues cover their operating costs, even if revenues are not sufficient to allow even partial recovery of capital costs.

101. "Core" customers are those customers of the incumbent utility who have limited opportunities to switch to competitive suppliers, while "noncore" customers are better able to seek alternatives. Typically, core customers are residential and small business customers, while noncore customers are large commercial and industrial customers. Noncore customers can rely on the incumbent utility as a backup service or carrier of last resort. Core customers thus often bear a greater share of overhead costs when deregulation leads to selective entry and bypass of the incumbent utility. With continued regulation of the utility's core markets, some of those costs would be shifted to remaining core customers while others would represent losses for utility investors. Thus, some putative benefits of competition are merely an income transfer from the utility's investors and core customers to its noncore customers, rather than a gain due entirely to enhanced productivity. Deregulation should not, however, be used as a means to achieve gains for some customers by imposing losses on the utility's investors.

3. Credible Commitments

102. Commitments made in bargaining situations influence the behavior of other actors only to the extent that the person making such commitments is credibly bound (by himself or others) to

honoring them.⁷² The notion of enforceable agreements plays a similar role in regulated industries as it does in competitive markets. As Professor Pablo Spiller of the University of California has shown both theoretically and empirically, the level of investment in long-lived infrastructure undertaken by a regulated (or recently privatized) public utility depends critically on regulatory institutions having been designed to ensure the credibility of the regulator's commitments that it will not act opportunistically once the utility has placed those nonsalvageable assets into service.⁷³ The President's Council of Economic Advisers has made the same argument concerning recovery of stranded costs:

[R]ecovery should be allowed for legitimate stranded costs. The equity reason for doing so is clear, but there is also a strong efficiency reason for honoring regulators' promises. Credible government is key to a successful market economy, because it is so important for encouraging long-term investments. Although policy reforms inevitably impose losses on some holders of existing assets, good policy tries to mitigate such losses for investments made based on earlier rules⁷⁴

The utility's investors would not be willing to commit vast amounts of capital to carry out an obligation to serve unless the regulator's offer of an opportunity to earn a fair rate of return were credible. Regulated utilities relied upon those contractual assurances in planning and carrying out their investment and service plans. Conversely, the regulator would not be willing to provide a franchise protected by entry regulation and to authorize the utility's pricing and investment plans unless the utility's promises to provide services were credible. The legal and public policy context in which the regulatory process operates provides guarantees to the parties to the regulatory contract.

103. As with private contracts, the regulatory contract must involve consideration, for the agreement is voluntary. The first public utilities did not spring into existence as the result of some

72. See, e.g., MILGROM & ROBERTS, *supra* note 71, at 131; OLIVER E. WILLIAMSON, THE MECHANISMS OF GOVERNANCE 120-44 (Oxford University Press 1996); WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM, *supra* note 69, at 69; THOMAS C. SCHELLING, THE STRATEGY OF CONFLICT (Oxford University Press 1960).

73. Pablo T. Spiller, *Institutions and Regulatory Commitment in Utilities' Privatizations*, 2 INDUS. & CORP. CHANGE 387 (1993); Brian Levy & Pablo T. Spiller, *The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Five Country Studies of Telecommunications Regulation*, 10 J.L. ECON. & ORG. 201 (1994); Shane Greenstein, Susan McMaster & Pablo T. Spiller, *The Effect of Incentive Regulation on Infrastructure Modernization: Local Exchange Companies' Deployment of Digital Technology*, 4 J. ECON. & MGMT. STRATEGY 187 (1995).

74. 1996 ECONOMIC REPORT OF THE PRESIDENT 817.

government conscription of private capital. The regulated utility submits to various regulatory restrictions including price regulations, quality-of-service requirements, and common carrier regulations. In return, the regulated firm receives a franchise subject to entry regulation in its service territory, and its investors are allowed a reasonable opportunity to earn revenues subject to a rate-of-return constraint. Without the expectation of earning a competitive rate of return, investors would not be willing to commit funds for the establishment and operation of the utility. The funds are committed to provide services to the customers of the regulated utility. Once the utility invests those funds, the varying length of depreciation schedules in regulated utility industries credibly commit the utility to performing its obligations under the regulatory contract by denying it the opportunity to recover its capital before the end of its useful life.

4. Relational Contracting

104. A question sometimes asked in regulatory proceedings is, "Where, Professor X, is this regulatory contract to which your testimony refers?" The regulatory contract is recorded in a bundle of documents not necessarily limited to a single franchise agreement: public utility statutes, utility commission precedents, adjudicatory decisions, rulemakings, hearings on the record, formal notices of proposed rulemaking, and public commentary. Such reasoning is neither novel nor inherently economic, for it is the same logic that propels the Supreme Court's analysis of state legislation that has given rise to a contractual obligation: "In general, a statute is itself treated as a contract when the language and circumstances evince a legislative intent to create private rights of a contractual nature enforceable against the State. In addition, statutes governing the interpretation and enforcement of contracts may be regarded as forming part of the obligation of contracts made under their aegis."⁷⁵

105. Although the original franchise agreement between the public utility and a municipality is usually the critical first document in the bundle of agreements concerning the relationship between the state and the utility, no single document is likely to encapsulate the entire regulatory contract. The

75. *United States Trust Co. v. New Jersey*, 431 U.S. 1, 17 n.14 (1977).

relational contract between the utility and the regulated firm is analogous to a corporation, which is an easily identified entity but consists of multiple contracts that define the firm. The corporation is often said to be a “nexus of contracts” between the firm and its investors, employees, suppliers, and customers.⁷⁶ Although there may be articles of incorporation, the contracts that compose the firm are not unified in a single document.

106. Professor Victor Goldberg of Columbia Law School provides an important early characterization of the regulatory contract. He observes that private contracts involve both an *ongoing relationship* that uses “rough formulae or mutual agreement to adjust the contract to current situations,” and *agency*, which occurs when a firm deals with many customers who “find it desirable to act collectively through an agent both to negotiate the terms and to administer the contract over time.”⁷⁷ Goldberg asserts that “[r]egulation can be viewed as an implicit administered contract in which both elements are significant.”⁷⁸

107. Even if there were no explicit documentation at all of the relationship between the regulator and the firm, the regulatory contract would still represent an unambiguous meeting of the minds. As with private contracts, the regulatory contract has both express and implied provisions. The franchise award, orders approving rates, and orders approving capital expenditures are clearly formal written agreements. Inclusion of capital expenditures in the regulated rate base is certainly a formal contractual agreement. The regulatory contract also has implied features. The utility undertakes capital expenditures of some extended economic lifetime in anticipation of cost recovery. Regulatory approval of such capital expenditures implies that there will not be fundamental changes in the regulator’s approach to the company’s market environment during the economic lifetime of those investments without addressing the issue of compensating investors.

76. E.g., FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 8-12 (Harvard University Press 1991).

77. Victor P. Goldberg, *Regulation and Administered Contracts*, 7 BELL J. ECON. 426, 428, 429 (1976).

78. *Id.* at 427.

108. Through the regulatory process, parties present testimony and evidence in formal public proceedings for the record. The agency gives formal notice of proposed rulemakings and considers the comments of interested parties. That process establishes the regulatory bargain and serves not only to make the process transparent, but also to assure the participants that their interests are protected, just as contract rights and remedies protect the parties to private contracts. The formal proceedings make a public record that helps to protect the legal and economic interests of consumers and the firm's investors.

C. The Principal Components of the Regulatory Contract

109. The preceding discussion shows that history substantiates that a regulatory contract *does* exist and that economic analysis reveals the rationale for why such a contract *must* exist. As a legal matter, the three components of the regulatory contract are entry controls, rate regulation, and utility service obligations. The state commission controls the entry of the utility's competitors and authorizes rates that give the utility's investors the opportunity to earn a "fair" rate of return on their investment. In return, the regulated utility must comply with regulatory accounting procedures for the disclosure of its costs, abide by price regulations, limit its business activities in other markets, invest in sufficient transmission and access services to all customers within its service territory who request service, operate efficiently as determined by the regulatory commission, make only investments that are "prudent," meet regulatory standards for quality of service, and comply with a host of other provisions.

110. The broad terms of the regulatory contract are governed by the regulatory authority's preceding decisions, legislation, and judicial oversight. Regulated rates are set through public rate hearings that follow rules of administrative procedure. The regulatory authority approves the utility's investment projects through prudence reviews and used-and-useful hearings. The regulators approve the prices charged by the regulated utility and review its financial performance. Thus, the regulatory contract is between the utility and the regulatory commission, as the agent of the legislature, which in turn represents the general public.

1. Entry Regulation: Exclusive and Nonexclusive Franchises

111. Regulations limiting the entry of competitors into the service territory of the incumbent utility are a standard feature of the regulatory contract. Regulatory commissions control entry through the awarding of franchises and the requirement of a certificate of public convenience and necessity. Entry controls have traditionally limited competition for utilities and allowed them the opportunity to earn a fair rate of return on their investments while conforming to rate regulation and regulatory service obligations. The elimination of regulatory entry barriers to achieve the benefits of competition represents a fundamental change in the terms of the regulatory contract. To avoid confiscatory outcomes, those changes need to be counterbalanced by altering both the responsibilities and compensation for incumbent utilities.

112. The traditional justification for entry restrictions in telecommunications has been to achieve the cost gains from *natural monopoly*. A technology exhibits the property of natural monopoly if one firm can produce the product or service at lower cost than can two or more firms.⁷⁹ Competition brings cost efficiencies and incentives for innovation that cannot be achieved through entry and rate regulation. Moreover, the high transaction costs associated with cost-of-service regulation lead many to question whether any potential cost gains can possibly justify continuing to regulate entry.

113. Accordingly, state PUCs are tempted to repudiate entry regulation in telecommunications. The elimination of franchise protection by the state legislature or PUC, however, is a unilateral change of a fundamental term in the regulatory contract. Although cost efficiencies may no longer justify continuing entry regulations, that changed circumstance does not eliminate the regulator's responsibility to allow incumbent utilities to recover their costs incurred before the change in the regulatory contract.

114. A common misunderstanding of the regulatory contract is that an essential component of that agreement is the government's grant of a monopoly to the investor-owned utility. The grant may take

79. See DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 295-96 (Harper Collins 2d ed. 1994); SPULBER, *supra* note 64, at 3; JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 19-20 (MIT Press 1988).

the form of an exclusive franchise or a statutory prohibition on competitive entry. To the contrary, the regulatory contract does *not* require monopoly, and the misapprehension that it does, in turn, supplies the erroneous premise for two misplaced arguments. The first is the assertion that those who defend the regulatory contract are necessarily opposed to competition and unconditionally maintain that, by itself, the government's introduction of competition into the market in question would constitute breach of the regulatory contract. The second misplaced argument is the assertion that one can disprove the existence of the regulatory contract in a given state by pointing to the existence there of a statute or state constitutional provision that forbids the state or any of its municipalities from granting an exclusive franchise. Neither of those two arguments is correct.

115. Suppose that a state not only forbade exclusive franchises, but also failed to create—by statute, common law, or regulatory practice of long standing—any alternative cost recovery mechanism that credibly assured the utility that the regulator would provide the utility the opportunity to recover its irreversible, nonsalvageable investments. In that institutional setting, a private company would be reluctant to contract with municipalities for the provision of utility services that would necessitate any incremental investment in nonsalvageable assets; and even if the company *were* willing to enter into such a contract, investors would be unwilling to supply the company with the requisite capital unless they were paid a risk premium substantial enough to compensate for the risk that the capital used to make those investments in nonsalvageable assets might never be recovered and a competitive return on that capital might never be received. That sort of risk premium is what investors routinely demand from irreversible investments in third-world countries that suffer from political instability and correspondingly unreliable judicial and regulatory institutions for the protection of private property. Most important, consumers suffer under such circumstances because it is they who ultimately pay the risk premium that is necessary to attract the investment required for the utility to render service, and it is they who will bear the disruption in service if regulatory instability induces the public utility to disinvest.

116. It should therefore be evident where the fallacy lies in the second argument—that is, the argument that the existence of a statute or state constitutional provision that forbids the state or any of its municipalities from granting an exclusive franchise disproves the existence of the regulatory contract in that state. It is a factual matter beyond any dispute that some states forbid the grant of an exclusive franchise.⁸⁰ The existence of such a prohibition, however, is hardly evidence that the regulatory contract does not exist in that state. All that such a fact proves is that the state has chosen a different means by which to achieve the ends for which franchise exclusivity is the chosen means in other states. The common objective in the two cases is to create the opportunity for recovery by the utility of the prudently incurred costs of irreversible, nonsalvageable investments that it made to discharge its obligation to serve customers within its service area. For example, a municipality or state, while not granting exclusivity to the incumbent utility, may nonetheless refrain from taking actions that would threaten the firm's recovery of nonsalvageable investments. That limitation on the discretion of the licensing authority may include the statutory directive to the public utilities commission not to grant an overlapping certificate of public necessity without good cause.

117. It should now be evident as well where the fallacy lies in the first misplaced argument—that is, the argument that those who defend the regulatory contract necessarily oppose competition and maintain that, by itself, the government's introduction of competition into the regulated market would breach the regulatory contract. Entry regulation is simply a means to an end; it is not the end in itself. The appropriate objective—the objective that advances economic efficiency and consumer welfare—is for the regulator to provide a credible mechanism by which the utility will have the opportunity to recover the costs of (and a competitive return on) its irreversible, nonsalvageable investments over the course of their useful lives. If a state in the past has chosen franchise exclusivity as the mechanism to achieve that objective but now wants to reverse course and allow open entry, then it must simultaneously introduce

80. *E.g.*, TEX. CONST. art. 1, § 26.

an alternative policy that is equally efficacious in creating the opportunity for achieving that cost recovery objective. In short, a breach of the regulatory contract does *not* necessarily occur when the state abolishes entry regulation; but a breach *does* necessarily occur when the state abolishes entry regulation without simultaneously imposing an alternative policy that will achieve the same cost-recovery objective for which entry regulation was originally intended.

2. Regulation of Rates

118. Rate regulation by state PUCs is another standard feature of the regulatory contract. Rate regulation to control monopoly power generally accompanies entry restrictions that were put in place to protect natural monopoly. In addition to controlling monopoly power, rate regulation often is perceived as a means of achieving universal service and maintaining reasonable rates for consumers and industry.

119. Control over rates also places responsibilities on regulators. The regulatory commission cannot unilaterally terminate its obligation to the utility. The utility's need to raise capital repeatedly, and constitutional protections against takings under the Fifth and Fourteenth Amendments, require regulators to take into account the interests of investors. Moreover, deregulation does not absolve the regulators of their responsibility to permit incumbent utilities to earn competitive rates of return on their investments. Revenues can be expected to fall under competition, while regulators continue to impose performance requirements on the incumbent utilities. The "end-result" test of *Federal Power Commission v. Hope Natural Gas Co.*⁸¹ should be applied to the effects of competitive rules so that investors are permitted to earn a competitive return on capital investment under regulation.

3. The Obligation to Serve

120. As a general rule in antitrust law, a firm may unilaterally refuse to deal with any prospective customer.⁸² That rule even extends to a monopolist's unilateral refusal to deal, so long as

81. 320 U.S. 591 (1944).

82. *United States v. Colgate & Co.*, 250 U.S. 300, 307 (1919).

the firm by doing so does not intend to create or maintain a monopoly.⁸³ That rule does not apply to public utilities, however. Utilities carry an obligation to serve customers in their franchise region at posted prices. That obligation requires the utility to expand its capacity to meet the growth and location of customer demand and to provide reliable service.

121. The cost of the utility's capacity investments are recovered through their inclusion in the rate base. The utility has an opportunity to earn the allowed rate of return on its capital expenditures net of depreciation. The utility recovers the cost of assets through depreciation allowances that are treated as operating costs. In short, the regulatory contract requires performance from the utility that has necessitated substantial capital expenditures, which were made subject to regulatory approval and oversight. If the regulator unilaterally changes the regulatory contract, a complete review of the utility's performance obligations becomes necessary.

a. The Obligation to Extend the Network to Provide Service to All Consumers

122. The public utility's obligation to serve entails the obligation to extend its network to serve new customers. Why must a utility be *forced* to make additional sales? The answer, in general terms, is that the private marginal benefit of extending service is less than the private marginal cost. Left to its own devices, the utility would build a network reaching a lower percentage of the populace than regulators would desire. For a fixed, geographically averaged price, the utility would stop expanding its network when the private marginal cost of doing so began to exceed the private marginal benefit. Regulators would prefer to have the network expanded to the point where *social* marginal cost equals *social* marginal benefit. Alternatively, the utility would depart from pricing its services at a fixed price and, instead, charge higher prices to customers in high-cost areas. Thus, the need to impose on the utility an obligation to extend its network is the direct implication of policies of universal service and rate averaging.

123. Early in the experience of public utility regulation, the Supreme Court recognized that

83. *Id.*